

Issue 173

**PS**  
★

RAF Series

**THE  
PREVENTIVE  
MAINTENANCE  
MONTHLY**

**C'MON  
MART... WE  
GOTTA GET THESE  
MEASURES  
THRU!**

**I'LL  
NEVER MAKE  
IT, P.J....  
I'M A VICTIM  
OF LOUSY  
PREVENTIVE  
MAINTENANCE!**

COMMO CENTER

*Colt Foster*

# Take it Easy...

That's right... take it easy. Take it easy with your Army equipment.

A lot of soldiers are really tearing up their stuff... like trucks, dunes, outboard motors, carriers, generators. They're trying to make them do things the equipment was never designed to do. Like—

—A three-wheeled loaded dune like a 10-tonner.



—A forklift trying to lift a load meant for a big crane.



—A 2500 generator loaded like it could get out DUCK.



—A dune trying to move a mountain as easy as your bike.



Stuff like that will tear them up every time. So, take it easy. Know what your gear will do. Read the load limits on the data plate or in the TM. And stay within the limits. Then your equipment will be around to work for you another day.

**PS**

THE OFFICIAL PUBLICATION OF THE U.S. ARMY  
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IS YOUR OWN INSPECTION  
EVER BACKED BY "GOOD"?

# M108 SP HOWITZER



Yes, they can move like nobody's business, but it's how they shoot that makes them big ground-gainers for Uncle.

This "standard" inspection-P&H guide will help keep your weapons looking good. Use it when packing your duffels, toolkits, and spareparts—say when you're on a job.

These 2 vehicles have about the same carriage, but their other spry'ng is almost equal, as long as, by no great trick, what you learn through these pages that you don't break the wrong deck by mistake.

# M109 SP HOWITZER



Howitzer Cannons

**CANNON TUBES (M108  
AND M109)** — Loads  
round, clipped, parallel,  
42, 50% powder tubes.



M108



M109

Keep these tubes on your table's rear and front, getting from the 800 High-velocity and General using in volume of of its (at least 1000) regularly after every firing session. If you see these are short about the tube's water-tight, get your upper guys together in a knowledge and follow-up guide looking in the M108 and M109 series.

**ROPE LOCK (M100)** — Lock loose, dirty, powder-busted, key, lock and wire damaged.



**MISLE BRING (M100)** — Latch key lock or screw missing, threads damaged, internal lock wrong.



**MISLE FLAG (M100 and M105)** — Flag damaged, missing, bent, pointed.



M100



M105

**CHARGE PUMP JACK (M100 and M105)**

— Excavator damaged, dirty, powder built-up, plug (or M100-only) loose, missing, split-threaded; stress band loose (plasma band only on cold-type excavator, not on welded type); key missing, damaged; key retaining screw split-threaded, bent; piston valve broken (won't close freely); valve cap threads damaged; retaining nut/brook missing; leg broken or improperly locked.



M100

**TRIPLE LOCK (M100 and M105)** — Handle adjusted wrong, bent, damaged; latches missing; handle being missing, worn, broken; flange lock not locked, missing; adjusted wrong (flange should be no play in the handle, always lock handle, missing).



M100



**COVER PLATE COVER (M100-only)** — Cover bent, missing; retaining pin bent, missing; perimeter window broken, cracked, painted over; lugs, quick release pin missing, broken, won't work right.

## Breath Mechanism Assembly (M10B only)

### CLOSING SPRING ADJUSTOR

— Tower dented, loose, mounting retaining ring buckled, missing; adjuster damaged; pin holes, worn, missing; spring leaf weak, damaged.



### REVERSE LOCK OPERATING HANDLE

— Unlatching plunger damaged; plunger spring weak; latch spring pin bent; worn; handle bent, closing latch loose; clutch spring bent, weak; spring pin missing, worn.



### REVERSE LOCK OPERATING SHAFT

— Bent; chipped; defects missing, loose; end buried, nicked, scratched; crank chipped, bent.



**EXTRACTORS** — Bent, pin or bolt, bent, buried, plunger damaged; won't push in; wire spring weak, bent, guide wire, missing; extractor legs loose or worn.



WHEN YOU GOO  
REVERSE LOCK — DO  
SOME YOU GET THE  
LEFT AND RIGHT  
ONE WHERE THEY  
BELONG.

### HANDLE STOP

— Bent, mounting screws loose, missing.



### BREATH RING ROOF

— Dirty, buried, nicked, roughed up.

### FEEDING FLINGER

— Won't push in, worn.

**LEF** — Chipped, bent.

**TORQUE KEY** — Bit bent, chipped, screws loose, missing.



## Breechlock Group (M108 only)

**FIRING TRIGGER**—Nicked, burned, installed wrong.

You'll find the correct procedure spelled out on page 110 of TM 9-2334-11-10.

NEVER  
SHARPEN  
METAL  
LUBED

**SEAR**—Dirty, burned, spring weak.



**LAMINAE**—Bugs trapped, oil; handle painted over; cracked.



The M108 uses tapered 708 1915-001-1041 (1915-0047) with handle 1991-0003 which is found in the JWP manual, while the M108A1 uses tapered 708 1925-001-4109 (1925-010) with a key and handle which is found in the -10 file.

### FIRING SILVER GROUP

Mount damaged, base scratched, dented, lead wire cut. Firing clamps missing, bent, or twisted; returned contact disc loose, weak; adjusting safety lever chipped, bent, loose; mounting bolt wire broken.



### SLIPING SHAFT AND FRAME GROUP

Contact damaged; disc bent, pin missing, weak; shaft bent, loose; spring, retainer, pin block and sleeve bearing dirty, damaged, missing; split areas scratched; slapping frame loose; mounting bolt loose—damaged.



### COCKING MECHANISM

Beating damaged, bearing lock pin badly worn, missing; retractor locked, bent, set; spring pin missing, badly worn.

### COCKING LEVER

Nicked, bent, dirt; spring weak.

### PERCUSSION MECHANISM

Spring retainer missing, bent; firing spring weak; retaining rings missing, damaged; firing pin possibly bent; point blunted; re-cocking spring weak, bent; stop notched, bent; guide bent; rolled wire, burned; straight pin badly worn, missing.



## M109 Recoiler Mount (M108 only)

**EXTRACTOR GAN AND BRACKET**—Can and bracket pitted; pin and screws loose; mounting screws loose, lock-wire broken, missing.



**EXTRACTOR DOOR**—Dents, chip-ped, nicked, bent, dented; dirty; mounting bolts loose; lockwire bent, missing.



**LAMINAE PULLERS AND BOLTERS**—Pul-lers damaged; bolters bent, broken. Replacing a pul-ler is a job for your support unit.

**SPRINGS**—Laminae tape broken or tight; pull wire not tight; tape loose on top bar; Fig. 10 is the L2 for tape loading mechanism; and Fig. 96 of year-12 "M108" comp. in filing and drawing.



**WHEEL**—Mounting bolt, loose; lockwire bent; missing.

**EXHAUSTOR**—Upper and lower upper mounting nuts loose; lower nut lockwire 20 loose; mounting bolts pin missing; lockwire upper sleeve connection; spring damaged; sleeve rusty, dry; painted over.

**COCKING BRICK BIT. PIN**—Oil level low; bit should be greased with slug; bent when weapon is in fire; deformed.



**SLIPING MOUNTING**—Recoil spring bent, excessive lockbars, wheels bent, round nuts loose, lock changing loose; bent spring pin loose, missing. If either above condition more than 1/4 inch, report it to the support (1/4 inch—that's about 10 threads on the face of a rock.)

**TRIPPING MECHANISM**—Hammer bent, too excessive lockbars, excessive firing pin; excessive force; lock changed; bolt shall spring pin loose, missing.

**OPERATING HANDLE ASSEMBLY**

— Pivots and springs weak, broken, pin loose (fall out); clutch assembly spring weak, won't disengage.

**WALCROCK PIN**

— Damaged, worn, bent, unseparated.



Tip: If you see your walk behind tractor (WBT) is noisy, replace it but don't go yourself we really often get this. (78) 1-877-834-8734 you see. The other walk from roller to see the walk trail up - note if rough steering or riding the front/fork.

**SPLIT RINGS** — Fitted, expanded.

**OPERATING CONTROL ASSEMBLY**

— Control cables loose, binding.

**CLOSING SPRING AND COVER PIN**

— Loose, thread damaged.

**WHEELBLOCK OPERATION COVER**

— Teeth chipped, broken.

**WHEELBLOCK OPERATION COVER (Cont.)**

— Threads buried, (Clear up with file.)



**CAR ROLLER** — Bent, Triax.

**CLOSING SPRING**

— Weak, broken, need adjusting.

Will have something wrong with the last spring of the front/fork drive assembly. Individually, the last spring (78) 1-877-834-8734 is now subjected to the experimental maintenance level. Changes to your 30 and 35" models call for eight foot springs being subjected per 15-day test for each to compare suggested.

**CARRIER PLATE**

— Damaged, bent, set by work.

**CARRIER BACK COVER PLATE**

— Screws and hex heads loose, strip out.

**ADJUSTER**

— Needs adjusting.

**Bench Mechanic****Assembly (M109 only)****BAKE SPRING STEEL PLATE**

— Damaged, weak.

**WHEELBLOCK OPERATION COVER**

— Teeth chipped, broken.

**CARRIER BACK PLATE**

— Bent, set against plate turned, damaged.



**LAMPING LEMER JOG ROPE** — Lever bent, broken, trim pin worn, won't hold in groove, lever too loose, cut. (Check bent, deformed, web plastic or wood binding, broken, painted over.)

**FRING MECHANISM HOUSING ASSEMBLY**

— Springs not damaged, housing rusty, dirty, corroded, mechanical bent, damaged, rusty, compressor spring weak, broken, spring pin bent, missing.

**FRING MECHANISM BLOCK ASSEMBLY**

— Won't operate smoothly, knob cracked, broken, pin missing, some broken spring weak, broken, follow shaft and roller rotated, turned, curve damaged, corner tags broken, wear as fast they fit the fring mechanism bars, fring pin damaged, broken, rusty, fring pin missing, missing.



Keep a thumb on the release after you're removing the fring pin. This retractor's upper protrusion and should last you if it fits of you.

**WCS FRING MECHANISM** — Don't work, compressor springs weak, won't work and this hammer guide yoke turned, corroded, hammer pin spring missing, set in upside down hammer operating over (upside down) (see Fig. 1.1) is your - 100 lbs hammer and no-barrel, corroded, corroded up.



TO  
FIND  
THE  
FOR  
THE  
FOR  
FOR  
FOR  
FOR



### M127 Gun Mount

**RECEPTIONER** — Indicator pin sticks out more than 1/4 in. looks around station table, platform looking out away rather than inward. Place hand to receive or open the cover to check the front receptor and piston indicator pins.

LEFT  
SIDE

**GRADE CRW** — Adjusted wrong. See Fig. 300-200 and 200-100 for correct adjustment. Just don't forget that you need both a vertical and a horizontal adjustment.



**REPLENISHED** — Looks like tape has (pulls) lightly to show filled, or level too low. See Fig. 23 of your LR for the tape reading indicators.



**CONTINUOUS BUFFER** — Looks in hydraulic lines from the buffer to the receptor. Page 17 of the 10-man manual and fill procedure in this book.

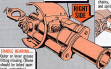
**GRADE CRW GRIPPES** — Buried. (These grappes can get stuck) and if the grade can't be adjusted (right).

### (M109 only)

**PARADE MOOR CYLINDER** — Look. See page 17 of the 10 for bleed and fill procedure(s).

**SPACES OR NOT** — Don't confuse. If cover stays, space face for red white-marked, chains, riddie, pins and springs missing.

RIGHT  
SIDE



**CRACK BEARING** — Color or lower grade lining missing. These should be later repaired, reamored.

**FOURWAYS** — Looks in hydraulic lines that equalizer for remote and accumulator, hand pump valve, regulator. Manually adjusted for existing ground or temperature levels.



Safe practice only. Same vehicle (especially a combination application) loading machine connected to incorrect handpump and accumulator by interchanging all lines. Check the water for hydraulic line leakage.

### Rommel Leader

INSPECT IN STONES AND CHANNEL COORDINATE — AND FINALLY IN THE BASH POSITION.



**STONEY POSITION** — Hydraulic valve, handle from forward, wheel (pins lock), feet, don't lose lines, modified surfaces covered, rusty, etc. (if applicable).  
Batteries aren't lock securely, won't operate properly, summer heat not fully retracted, nonconductive cable wires, frayed, rusty, electrical wiring and terminal broken, damaged.

They can be pushed, though, since they're not loading either. If you're stuck in that way, that will come out and operate.



### (M109 only)

COMPLETE ELECTRICAL SYSTEM DISCONNECTED (ELECTRICITY) AT 7 O'CLOCK 0-100 (ELECTRICITY) WITH NO ELECTRICAL SYSTEMS ELECTRICALLY WITHOUT A DANGER SIGNAL!

**LOADING POSITION** — Gun tube/insulation cable not adjusted right (see Fig. 300-100 in your 10 for the right way to do it). Electrical circuit not working, controls not working.





Establish the position of the drive and reverse control (Shift) bar by placing it in the 1 drive before you turn the master switch and set gear switch (R, of course).

### CLICK

1. When you lower the reverse into 1st gear and the 1st gear loading tray is fully extended, the shift is engaged by the intermesh locking system.

### CLICK

2. When you start the reverse cylinder away from running position, the shift is engaged by the intermesh locking system (reverse large rotating wheel).

### CLICK

3. When you put the reverse cylinder into running position, the shift is engaged by the intermesh locking system (reverse large rotating wheel).

By the way, while you have it in the loading position, check these, too:

**WET** — Packed rye, dirt, fuel, damaged screen hose, missing, missing screen mesh not adjusted right (See Page 50 for R) in your 10-10-10 for the back.

**RAMMER BECAUSE** — Not adjusted right. (Fig. 14 in your 10-10-10 says how you do it.)

**RAMMER POSITION** — Rammer plate not 1/2 inch down, rickety, bent, not ready, rammer cylinder looks around fuel and plate out.

**ACCELERATOR** — Wrong string pressure, controller bars loose, loading, dirt, spring, right gear control valve broken or won't work (See Page 50 for R) in your 10-10-10 for the back.



With the fuel control bar in the accelerator, the string pressure should be between 200 and 250 PSI. The accelerator pressure valve should automatically control the fuel valve pressure between 200 and 250 PSI.

It's a good idea to have the right gear control valve in the "open" position of the line you're operating the article.

**HYDRAULIC POWER JACK BECAUSE** — Hydraulic leaks, retaining band loose, bolts and nuts loose or level in rear-side low.

For other hydraulic power jack tips, see the "Fuel After Pumping" work. However, the accelerator fuel pressure must be between 200 and 250 PSI before you take the machine on your own (please read it!).



## Elevating and Traversing Mechanisms (M100 only)

NEED SQUARES? SEE...

TRY SOME LUBE.

**ELEVATING MECHANISM** — Head pump looks loose, cracked, worn; turn easy; hydraulic manual extender looks; connections loose.



**ELEVATING POWER** — Won't elevate smoothly; straps, other power transfer in manual, elevating cylinder looks; not damaged, rye, packed hydraulic lines and fittings look, look, look, look.

**TRAVERSING POWER** — Magnetic wire indicator won't work, indicator light (red) won't go on, main toggle switch not of order, control toggle switch to indicator power control won't work.

**TRAVERSING MECHANISM** — Power Manual or P1 is indicator control (see page 7) work; fuel work, fuel, drive work, back indicator level trigger won't release (spring loaded); shaft (rotated) fork (rotated) look, missing, excessive backlash at indicator (1/2 inch in 10, though); handwheel appears, rye, weight won't transfer smoothly; traversing gear housing looks fine and things look; gear area of fuel line (check) in removing the plug; see Fig. 10 (see page 50) (check, check, check, look, look, look).



Remember, Shift bar moved to power for power is normal and easy — just jiggle the handle or gear will work.

**WAND BECAUSE (both M100 and M100)** — Lubrication, spring, chains, straps, safety wires, rye, damaged, broken, missing.



## M145 Telescope Mount (T208)

**WHEEL CROSSLEVEL, ELEVATION LEVEL, PITCH LEVEL, GROUND BART CROSSLEVEL**—Cracked, broken, hard to read, loosely mounted, covers missing. Be too loose or too tight won't turn freely or locked positional level not locked, not centered within gradient.

**GENERAL APPEARANCE**—Misaligned screws and fasteners; loose, faulty and parts dirty, rusty, paint chipped, mounting surfaces faded.

**SCALE, HANDPIECE, BEZELS**—Handwritten, painted over.

**LAKING**—Bent or off-link; parts missing, damaged; linkage not adjusted properly.

**ELEVATION MECHANISM**—Exposed, damaged, time-degrading, missing, structure mechanism needs adjusting.

**COUNTER ELEVATION AND CORRECTION**—Cracked, dirty, condensation, hard to read, sights won't line up right.

**ELECTRICAL PARTS**—Lamps burned out, lenses cracked, clipped, broken, electrical parts and wiring damaged.

**SCREWS AND BOLTS**—Torn, missing, made not wrong, not fitted completely according to instructions in TM 9-119-1 (Jul 64) w/2 changes.

**PARTS AND ACCESSORIES**—Missing, dirty, broken. Your TMs will tell you what you should have. If anything's missing, get post requisition in on the double.

Incidentally, the M145 uses the linkage assembly that goes under 880 (1004-674-2975) while the M180's linkage uses 880 1246-874-5676. This means the M180's is longer and it has lower-throw, also with the M180's.

I THINK OUR LINKS ARE DAMAGED AT AGLASS.

## M117 Panoramic Telescope (T177)

**SCOURING**—Excessive wiping, telescope lens and engaged in mount; knobs, caps burned, dirty, streaked; if no telescope pointed out, locked to the ground.

**LEAK PROBLEMS: OILS, GREASE, CONDENSE**—Cracked glass lens, scratched lenses, wiring insulation frayed, broken, worn.

**FLUSH ASSEMBLY**—Clipped, bent, won't rotate; stop-bolt ways; water assembly dirty; the water cap loose, damaged.

**EMERGE ASSEMBLY**—Glass dirty, scratched, smeared, cracked; hinge out of line; water or condensation marks through eyepiece.

**EYEPIECE**—Oil, lens, scratched.

PRECISION ALIGNMENT'S NEED SPECIAL CARE!

**LAMP, BATTERY, BURNERS**—Burned out, won't light when light switch is on.

**SCREWDRIVER AND STYL, LIGHT PENCIL, TORX SCREWS, DE FLECTION, GUNNER'S MEASUREMENT SCOTT**—Worn, not tight, bent, broken, loose.

**COUNTER ELEVATION, CORRECTION, SCREWS, DE FLECTION, GUNNER'S MEASUREMENT SCOTT**—Worn, not tight, dirty, bent, broken, loose.

**PUBLICATIONS**—Missing, torn, not up-to-date, hard to read, wrong copy. Check out the next few items from: TM 9-1208-217-10 (Nov 64) w/2 changes 1 and 2; TM 9-1208-217-20 (Jan 65) w/2 changes 1; TM 9-1208-217-2007 (Jan 65) w/2 changes 1 and 2; TM 9-1208-217-2007/2 (Jan 64) —880 only; TM 9-1208-217-2007/1 (Aug 64) w/2 changes 1 and 2 —M145 only; TM 9-1208-217-2007/2 (Aug 64) w/2 changes 1 and 2 —880 only; LO 9-1208-217-10 (Nov 64) w/2 changes 1 and 2.



## M15 Elevation Quadrant (T2312)

**ARC LIGHT** — Won't work; cable frayed, burnt.

**COUNTER WINDING** — Dirty, contamination, cracked, scratched.

**LAMPS** — Won't light when toggle switch is on.

### ARMING CORRECTOR ELEVATION COUNTER

— Bent, won't fit; freely throughout range, won't change readings correctly or reliably.

**ORANGE ELEVATION COUNTER, CORRECTOR** — Not readable, cracked.

### PANEL SCROLL PIN, ELEVATION COUNTER

— Missing, loose, glass cracked, protruded, markings hard to see; buttons distorted; local vital bubble not centered within one position.

**ELECTRIC SWITCHES AND CONTACTS**

— Contact pins bent, loose; contacts dirty, worn.

**LAMP COVER** — Missing, bent, cracked; chain broken, not attached.

CRACK  
LOOSE  
SCORCHED  
DAMAGE  
LOOSE

### NE ARCHER 500 GUNMOUNT QUADRAK

— Frame bent; elevation scale loose, hard to read; damaged view rail loose, dirty; cracked; button distorted; misalignment of leveling level; cracked, loose, won't turn and hold tight.



### WING TELESCOPE MOUNT FEED

— Mounting curves loose; mounting surfaces scratched, rusty; tapered leg, air loose, worn; chain bent; missing cable loose, frayed; grounding wire loose; bent; distorted; connector arm, pins and vibrator bracket skewed, bent; electrical connector damaged; sensitive cable cover loose; function elevation and deflection (controllable) bent; won't turn and hold tight.



### WING OPTIC PERISCOPE ARCHER 500

— Missing screws loose, missing window dirty, cracked, tapered glass pin bent, bent, won't work.



## M118 and M118C Elbow Telescope (T17612, T17613)

**RETICLE SELECTOR SWITCH** — Loose, bent; won't engage detents.

**GENERAL APPEARANCE** — Fasteners are and main housing dented, scratches; mounting screws loose, missing (about 20% of set, but mounting surface scratched, rusty, bent).

**CRIPPLE** — Rubber sheet attached, brittle; too thick; scratched; dirty, frayed; sagged up, covered with frays.

**LENS, MAG MIRROR** — Bent, cracked.

**LENS MAG** — Tube broken, cracked, loose; axis hard to read.

**LIGHT CONTROL SWITCH (MIRROR)** — Not bent, cracked; won't light lamps, won't change light intensity as knob's turned; no read-out visible at the end of the range.

**CANT CORRECTION (CORRECTOR) KNOB** — Broken, cracked, won't work right.

**ARM RELEASE LEVER** — Won't move away from stop; distorted; spring damaged.



### ITEM, CODE, QUANTITY

Here's the list of M118's good through Aug 1964. (Make sure your inventory has all that's missing in it.)

| Item Number     | Desc     | Units | Status (if Applicable) | Notes     |   |
|-----------------|----------|-------|------------------------|-----------|---|
| 4-2310-217-0001 | 21 April | 0     | 2                      | both      | Installation of gunner's telescope (M118) through low ramps.          |
| 4-2310-217-0002 | 14 March | 0     | 2                      | both      | By dropping indicator and fuel cap cover locking pins.                |
| 4-2310-217-0003 | 7 April  | 0     | 2                      | both only | Installation of sensor reduced plunger level.                         |
| 4-2310-217-0004 | 31 March | 0     | 2                      | both      | Installation of low cable bracket.                                    |
| 4-2310-217-0007 | 20 May   | 0     | 2                      | both      | Installation of improved motor for counterdrum; replace cover spring. |
| 4-2310-217-0008 | 20 May   | 0     | 2                      | both      | Installation of improved flashlight mounting.                         |
| 4-2310-217-0011 | 4 April  | 0     | 2                      | M118 only | Rebuilding motor drive belt in code.                                  |

## LESS WORK!



### Intermittent

OK, there here's a bit of good news that changes some of the tedious work on the procedures and save some dusting firing of the M16-MM gun on your M16-CEN.

Start with the Preliminary Step 1, Big 2-12, in TM 9-2000-122-10 Aug 81: The Man into what from 7 gun changed, like so:

The gun tube chamber area should be visually inspected and any debris found in the tube removed prior to loading the next round.

Now, all on be consistent with para 2-11 (g), page 4-4 of the M16 TM, here's the way to change from 1g to read:

After each round is fired, visually inspect the gun tube chamber. Remove any debris which will not permit the next round to chamber.

During firing activities, there is no requirement to clean out the complete gun tube — one end & other — just well as the round's chamber.

This latest word on firing prep is TT 3024 (Nov 88) from the U.S. Army Weapons Command.

## AMMO PUBS CHECK

DA Form 2028, Recommended Changes to DA Publications, is OK for reporting errors in publications covering small arms, components, and explosives. But, for correcting publications on military weapons and conventional ammo you use DA Form 3415, Ammunition Condition Report, like it says in para 5-44, Change 2, TM 14-710.

Forms covering classified info, of course, you handle like it says in para 1-12 and para 1-5, in TM 14-710.



## SEE THE LIGHT?

You and/or your guests having a question like so you try to check the wires on your M&M lighting equipment that — even though you follow the wiring diagram (with the wires to the boxes)?

This diagram is probably the cause of your trouble.

It shows the M&M wiring your lights laid out in a way that has the gabled branches in the wires going in the way of the change out the lights.

Take the way way out . . . move the lights end-for-end.



## GOT A HAPPY TRIGGER?

Hey, Gamma, open the hood/hood of your M&M at 100-M&M available with a manual and see that it's got the right trigger on it, will you?

These older model units will change or happen . . . like the valve doing off when you close the tank.

If the van end of the trigger looks like this, then it's OK.



But, if it's been modified to look like this, get your answers to replace Gamma 1000-100-000 will look the right way.




## DRAIN BEFORE SHOOTING



No more, y'say, getting all of a barrelful of water after firing a stream or two, eh? Just point the muzzle down and let it drain, y'say?

Don't bet your life on it! Don't wish a rifle with a bore as small as the **30.06**'s! Here's why: backflow motion of the water and capillary motion in a small area like this makes it hard to get water out. If enough stays in there and you fire off — Bang! There goes another barrel — and maybe a chunk of you.

Water could triple the pressure in the bore when the weapon's fired.

So, make this your own personal SOP every time you drop out of the ditch or fight in a heavy rain in Chastoyland. Before you fire that weapon:



# WATER... MORTAR... UGH!



The delays or even for a short round-trip with the 800-series R1-REM mortar— even its massive and the public outcry— it you remember 3 important things:

1. Keep your mortar dry—especially the pre-pulver and spout system—by keeping it covered with a tarp or some such and up-out of the wet.



1. Repair the tube every time it gets dented.



Pages 70 and 104 of your TM 9-8066 (Aug 87) w/ 1-Changes will show you.

## FAITES ATTENTION!



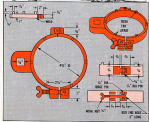
HEY, BULLETS —  
ARE YOUR BATTERIES —  
LAD? BE YOU ARE —  
CHECKED-OUT?  
NO P

Oh, never get enough love of CBPS, batteries for your 800-subject's wire-guided missiles. Check the expiration date on every battery on your shelf and order replacements (PM 6435-884-1007) at least 4 months before they run out... so they'll have plenty of time to get with you. And, remember, never use any battery that's passed its expiration date unless it checks out OIL (page 12 in 10 vol) on your 800 battery case.

**Don't Worry.**

We had a rough time trying to remove the collective tube standard (top) around. It slipped off, damaged other parts and could have injured a mechanic.  
 Drill-water is being sprayed on some up with this fan. Handy wrench made out of spring material.  
 It won't slip off. In addition, you can use the winging which is usually a common operation. It works like a charm.

Frank Brown and Donald Light  
 in Clark, California



THIS PROVED ONCE AGAIN THAT WHEN BATTER SCOURERS ARE PAID, SUCCESSFUL WORKERS WILL MAKE THEM. THIS TOOL IS AN IMPROVEMENT ON THE ONE DESCRIBED IN THE LAST ISSUE OF "WRENCH".



**Who Supplies?**  
 That's what the engine-eyes at AVIUM want to find out when you live off an EOL on an engine component. To help them come up with the answers, which can lead to improved equipment, they need more info on the various engines, block 95 of the EA Form 267. Namely—when you list the serial number of the killed gear, also include the engine serial number. Also, be sure that you list the aircraft serial number in block 2—if available.





NEW

SPINNER DEAL



Dear Sir(s):

Our 17's have us in a spin over what they call "unauthorized modifications" to our laminated (M-4) prop spinners.

First, we ordered a new modified spinner (bulkhead, P/N 14 00-024-0004, P/N 014147, which comes with a thin wide reinforcing band to stop bulkhead cracking.

But, to get our old spinner, P/N 14 00-024-0004, P/N 014147, we still need bulkhead reinforcement around the spinner to take care of additional rotating stress.

Also, our spinners have a double, drilled hole in the inside around the cutout area for the blade shaft, to keep the spinner from cracking when the cut-out holes are enlarged to fit.

Can you assist us with our 17's by doing some authority for these spinner changes?

OWE L. BL. W.



SPINNER HUB HOLE



REINFORCING BAND

POWER: 1 1/2" DIA. 200" DIA.



Dear Mr. L. B. W.,

You won't find any release word for modifying the D580-1 spinner assembly to make it fit the D-114-7 bulkhead but your CO can authorize the spinner hole drilling. To make this fit you need to put up the hole location on the bulkhead show drill the required holes in the spinner for the additional reinforcing covers.

Instructions for reinforcing blade covers by adding doublers was in the old TRAVN 20-14 (Mar 60) US Digest on Aeromatic and Spacemaster new spinners were also delivered with doublers, P/N C-411, in them—so they're authorized.

A new, stronger spinner and bulkhead assembly, P/N RM-218, is in the works.... one that should end this "bird nest" problem that has always been with us.

*Wally*

## KEEP IT FLOWING, MAN!

Oil keeps the wheels turning—if the right amount gets to the right places.

That's the No. 1, No. 2 and No. 4 main bearings in your heavy E175-D T-45 engine. If the oil film on 2 and 4 main bearings gets thinned, the oil film on the turbine wheel bearings is going to be reduced and you may wind up with accelerated bearings. You know what that



means... wheel bearings and caught a Super engine.

Small wonder (It's 400 Amp Oil) on TR 15-1120-114-30P41 and TR 15-1508-111-30P41 now calls for the most frequent checking of the filter and washers.

Oil the cleaning pump for the filter and washers is right in the Heavy organizational maintenance job.

# COLOR ME DRAB!

Dear Drabdy,

We've had just a little bit of trouble locating the drab number for the new four-color color drab paint called for in Change 2 of Fed-047 to 19-4000. I am printing and marking all drabs.

Every time we make a color purchase for four-color paint we get a different shade.... makes a kind look like a patchwork quilt!  
 199 9, 99, 9.

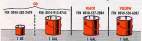
What's the drab number, Drabdy?

GENERAL TIME

Dear Ferguson B. W. C.

No sweat! The paint you need is listed on Page 19 of Red Cat CHANGING (1 Jan 66) like so—four-color acrylic, miscellaneous type, olive drab, shade 15-0007, MIL-L-19134. FSN 8010-001-2479 will get you the 1-gal can and FSN 8010-01-0749 will get you the 1-gal can.

You'll also need black four-color acrylic basecoat for bonding, which means you want shade 57-054. FSN 8010-001-2884 handles the 1-gal can.



Also listed is—yellow four-color acrylic basecoat, shade 15-054, for marking. FSN 8010-001-0087 gets you 1-gal can.

*Handwritten signature*

**NOW —  
RAVEN BEARING  
WEAR LIMITS!**



**Dear Windy,**

The only way to check for wear on the Survan (200-44) ball joint pitch change link rod end bearings is by hand-checking the free play.

The trouble with this method is that everybody has a different idea of how much free play is OK. A more accurate way of measuring is needed. Tell me, Windy, are there any others in the world?

**BOB G. H.**

Dear Augustus G. H.,

You must have a crystal ball or something . . . the Division Counsel has just come up with these links, which will go into TM 11-2120-200-20, side (axial) play, 0.002-in maximum; end (brake) play, 0.004-in maximum.

*Windy*

## CYCLOHEXANONE HEX



Put it into on a one-country trip when you've allowed MIL-L-6082E, Grade 1100, oil with cyclohexanone additive to introduce it as a one-time, emergency lube only. You want plain MIL-L-6082 as the new MIL-L-2081 oil. The additive can put the hex on your lube for real by loosening engine sledge.



# JOE'S DOPE

## SOME LIGHT ON A DARK SUBJECT

WOW! IS IT EVEN  
DARKER THAN THE  
DARK... TRY... A LIGHT.  
WOW IS IT?

J-O-J  
I WISH I HAD  
SOME LIGHT...  
J-O-J

J-O-J  
WOW!  
NO ONE EVER  
SEES THE  
FACE!  
J-O-J

HA! HA!  
DARKER  
THAN DARK!

J-O-J  
A BOARD  
OF THREE, A  
FAST GARBAGE  
J-O-J

THE  
WARRIORS  
WON'T  
BE  
J-O-J

A ONE OF  
FIREFLYS!

WOW!  
— WE'RE  
THE ONLY THING  
LEFT! JUSTICE  
WAS... SO DON'T  
WALK IT  
ON...

OH WISE GUY!  
I SEE YOU NOW!

JUDGING BY YOUR BLIND  
STRENGTH, IT WOULD BE WISE  
TO ASK: YOU HAVE SOME  
GENERATORS, FROM THE...

WELL,  
THE  
WARRIORS  
WON'T  
BE  
J-O-J

EVERYTHING WAS  
DARKER ALONG, BUT  
ONE... THE DARK  
WARRIORS  
WON'T  
BE  
J-O-J

WELL,  
THE  
WARRIORS  
WON'T  
BE  
J-O-J

WARRIORS  
WON'T  
BE  
J-O-J  
COME ALONG  
AND YOU'LL  
SEE WHAT  
HAPPENED!



OH HANG ON...  
WASN'T IT?  
REMEMBER?

LOOK HOW  
BEAUTIFUL IS IT  
TODAY... THEY'RE  
ACROSS HERE!



I THINK YOU  
LOOKED...



BEFORE I  
DIED... WHAT DO  
YOU KNOW ABOUT  
REMEMBER?



YOU WERE TOO  
MUCH BUT  
OK...

A  
MOMENT  
NOW... NOW  
JUST...



FIGHT AND NIGHT  
IMPORTANT... YOU  
DON'T OVERLOAD  
THE...

NOT DO THE  
MISTAKE...



YOU DON'T LOOK  
IN EVERY PART?  
EVEN CHECKED IN  
THE AREA... LIKE THIS  
DON'T EVEN LOOK?



MEMORIALS WHICH ARE  
FORGOTTEN OUT TO THE  
IMPORTANT STUFF FIRST  
LIKE CLEANING, LISTENING,  
POWER, FOOD, AND IF  
ANYTHING IS LEFT OVER...  
YOU PUT IN THAT  
MONEY.



BUT IN EVERYTHING  
WE SHOULD BE AS GOOD  
AND WHEN ALL WE DOGET  
HOW? YOU DON'T BELIEVE  
LEFT TO JAP  
MONEY... AND  
NOW.



CAN YOU  
SEE THE  
MAPPING  
STUFF?

YEAR  
MONEY?



**Joe's**

# Dope Sheet



Your generator now is the heart.  
That gives all your gear its first start—  
Your ammo 'n' light,  
All your tools for the fight—  
So care for your rig, 'n' get smart.



**WE HAVE THE WORLD'S BEST EQUIPMENT ... *Take care of it***

IF YOU WANT TO DISPLAY THIS ADVERTISEMENT ON YOUR BULLETIN BOARD, OPEN STAPLES, LIFT IT OUT AND POST IT UP.



WITHOUT THESE PLUGS WE  
CAN'T YOU OPERATE SAFELY  
FOR HOURS BY THE HOUR... AND  
AS FOR BOOTS, ENGINEERS,  
MECHANICS, OPERATORS,  
PILOTS AND AIRCRAFT ALL  
WEEK DIFFERENT SIZES,  
LIKE THESE...



LET'S HAVE A LOOK-SEE  
IN THE FUEL TANK TO  
CHECK FOR CLEAN FUEL.  
GARY LOCKE THE  
STUFF!



EMPTY FUEL  
COULD'A CAUSED THIS  
BLACK-OUT... MAN,  
THE JUMP POWA'S  
CONSIDERABLE... GLOBE  
LIFE'S, YOU MAKE IT.



BY THE WAY,  
HOW'S THE FUEL LEVEL  
IN YOUR CROCODILE?  
NIGHTY WAKOON!



ARE YOU  
SURE YOU  
WANT TO BURN  
IN ENGINE  
EVERY TIME,  
BERRY PUNCH,  
ALL THAT?



HOW! THIS IS ALMOST  
EMPTY YOU'RE GOING TO  
TRY THIS ENGINE... IN THE FUTURE  
YOU'VE GOT TO LOOK CHECK!  
BE SAFE IN CASE THE FUEL  
TANK'S A BUSTARD,  
GUY THAT!



YEAH! LOCKE  
THE MAN YOU  
GOT TO BURN  
OIL... MUST BE  
A LEMON.



NOT SAY! NEW  
MATERIALS SHOULD  
HAVE BEEN CHECKED  
GIVEN PLUGS WERE  
IN PLACE... THE  
GUY WOULD OIL.

NOW LET'S SEE  
HOW SHE HE AS  
FLE AS  
WINDING-F



YOU'LL GET THERE EVEN A  
PINE CAN PULL OUT THE  
BROKENNE STAGE.



UNPROF  
GROUND CAN  
MADE A SMALL  
INFLU. AND AND  
SUN YOUR BEST



HEY! WHO WENT UP  
WAS YOUR SAND  
BAGS!! ON THE OUT



HEY! WHY  
THEY WASHES  
THE BONE ...  
THEY ARE REALLY  
BAGS.



THEY ALSO CUT  
OFF VENTILATION!  
IF YOU SAND BAGS IN  
KEEP AND FLY IN  
SAND ON THE LL  
OVERHEAD AND  
HERE YOU GIVE.



SURE, SAND BAGS PROTECT  
YOUR EYE. BUT YOU ALSO NEED  
SHOES, RAIN COATS, AND  
BAGS!! ON THE LL  
OVERHEAD AND  
HERE YOU GIVE.



HEY! BULL...  
SHE'S LOW  
ON SAND. IT'S  
FALL TO UP  
NOW.



**HOLD IT!**  
HEY! FILL  
FILL. THANKS  
WHEN THE ENGINE  
IS RUNNING  
DO NOT





HEY BOY!

BECAUSE I KNOW...  
THERE WAS...

WHY NOT TAKE  
GENERATOR ON  
LEVEL GROUND!

...IF THAT WAS AT THE  
LEVEL, YOUR GENERATOR WOUL  
GET LAID TO YOUR CROSS-  
SEAM? AND THEN DON'T  
BLAMME TO OTHERS.

HEY BOY,  
HOW COME  
YOU KNOW  
ALL THIS  
GUY?

BECAUSE I READ  
THE PAPER—ON THIS  
ON IMPROVEMENTS  
PAGE—IF THE  
GENERATOR ONLY WAS  
MANUFACTURED  
PURE I COULD TELL  
HOW I GOT A REPAIR  
PART. THEN MY SUPPLY  
WENT TO THE OFFICE OF  
U.S. ARMY AMMUNITION  
EQUIPMENT COMMAND  
ATTN: AMMUNITION, G.  
8800 JACKSON ROAD  
ST. LOUIS, MISSOURI  
63114

AND SO, IN  
RECOGNITION  
OF YOUR  
CONTRIBUTION TO  
THE FINE  
PERFORMANCE OF  
THE GENERATOR  
EQUIPMENT IN  
"THE LAST"...  
WE DESIGNATE  
YOU...

GET  
MAINTENANCE MAN  
OF THE MONTH!

HEY,  
GET ME SEVER  
BOTTLES OF BEER  
AND... OH BY THE  
WAY... GET ME  
THE "KEY"...



## GROUND MOBILITY



FOR  
G740-SERIES  
TRUCKS...

**STOP  
THE  
GO**

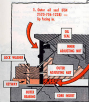


GO means gear roll, and it means trouble for your G740-series D74-series truck's rear wheel bearings if it gets into the hub. Even worse, GO can mean disaster if it breaks into your brake linings.

But there's 2 ways that block GO—if they're installed right, like on

1. Outer oil seal (PN  
2025-208-1228) —  
by being in.

2. Keyway with brass  
nut — welded to the  
inner end of the key-  
way, under the outer  
bearing and locked up  
by the outer oil seal  
bearing nut.



FOR THE  
PIND BODY  
TYPE CENTER  
OIL SEAL... AND  
THE LOCK NUT  
ON YOUR D74  
S-SERIES (PN  
2025-208-1228)



This 1/2" by 1-7/8" in. thick nut is making integrator its own truck. It has to be cut to fit from Cook, Mass. PN 2025-208-1228. Bevel one end a little to fit where the inner end of the keyway steps up.

# THAT SHE BLOWS

You ever notice how a loose radiator part can get an expensive piece of equipment out of business? Here you have!

One of the most common examples of this problem can be found in the radiator cap and its gasket, tank, pressure device, self-propelled gas, lock (B)—you name it.

Here, you see the radiator coolant level on your "before-operation check." You may even notice that the cap was on tight which means that the large cap spring was in good shape.

But there's one more simple check you want to make—see that's been looked all the time.



Focus on the center of the cap... the vacuum valve. This valve is spring loaded and it should be seated (B) if the spring is good.



Flick the valve with your fingers and if it does not spring back to the tank pressure, the valve is shot and you need a new radiator cap.

## HERE'S WHY:

When your engine is running the vacuum valve has to be closed so that your cooling system can be pressurized. The only time the valve opens is when you



loosen a broken valve may not even right to give you the seal you need during operation—that's the rub.

When the valve is not seated the water pump will push coolant right out the overflow hose. And if you lose enough coolant your engine will over-heat—maybe worse... like a stuck block!

shot off the engine and the radiator and atmospheric pressure operates to prevent the radiator from leaking. You won't see a valve in the open position unless it's shot.

BE SURE YOU GET THE "REAL" VACUUM VALVE...NO BENCH BLENDING A SECOND ENGINE FOR LACK OF A TWO-BY-FOUR RADIATOR GASKET



## WEIGHT CLASSIFICATIONS



| Vehicle Weight Classification |                    | Weight Classifications |                       |
|-------------------------------|--------------------|------------------------|-----------------------|
| Weight Class                  | Weight Range (lbs) | Weight Class           | Weight Range (lbs)    |
| Class 1                       | 10,000 - 14,999    | Class 10               | 100,000 - 149,999     |
| Class 2                       | 15,000 - 19,999    | Class 11               | 150,000 - 199,999     |
| Class 3                       | 20,000 - 24,999    | Class 12               | 200,000 - 249,999     |
| Class 4                       | 25,000 - 29,999    | Class 13               | 250,000 - 299,999     |
| Class 5                       | 30,000 - 34,999    | Class 14               | 300,000 - 349,999     |
| Class 6                       | 35,000 - 39,999    | Class 15               | 350,000 - 399,999     |
| Class 7                       | 40,000 - 44,999    | Class 16               | 400,000 - 449,999     |
| Class 8                       | 45,000 - 49,999    | Class 17               | 450,000 - 499,999     |
| Class 9                       | 50,000 - 54,999    | Class 18               | 500,000 - 549,999     |
| Class 10                      | 55,000 - 59,999    | Class 19               | 550,000 - 599,999     |
| Class 11                      | 60,000 - 64,999    | Class 20               | 600,000 - 649,999     |
| Class 12                      | 65,000 - 69,999    | Class 21               | 650,000 - 699,999     |
| Class 13                      | 70,000 - 74,999    | Class 22               | 700,000 - 749,999     |
| Class 14                      | 75,000 - 79,999    | Class 23               | 750,000 - 799,999     |
| Class 15                      | 80,000 - 84,999    | Class 24               | 800,000 - 849,999     |
| Class 16                      | 85,000 - 89,999    | Class 25               | 850,000 - 899,999     |
| Class 17                      | 90,000 - 94,999    | Class 26               | 900,000 - 949,999     |
| Class 18                      | 95,000 - 99,999    | Class 27               | 950,000 - 999,999     |
| Class 19                      | 100,000 - 104,999  | Class 28               | 1,000,000 - 1,049,999 |
| Class 20                      | 105,000 - 109,999  | Class 29               | 1,050,000 - 1,099,999 |
| Class 21                      | 110,000 - 114,999  | Class 30               | 1,100,000 - 1,149,999 |
| Class 22                      | 115,000 - 119,999  | Class 31               | 1,150,000 - 1,199,999 |
| Class 23                      | 120,000 - 124,999  | Class 32               | 1,200,000 - 1,249,999 |
| Class 24                      | 125,000 - 129,999  | Class 33               | 1,250,000 - 1,299,999 |
| Class 25                      | 130,000 - 134,999  | Class 34               | 1,300,000 - 1,349,999 |
| Class 26                      | 135,000 - 139,999  | Class 35               | 1,350,000 - 1,399,999 |
| Class 27                      | 140,000 - 144,999  | Class 36               | 1,400,000 - 1,449,999 |
| Class 28                      | 145,000 - 149,999  | Class 37               | 1,450,000 - 1,499,999 |
| Class 29                      | 150,000 - 154,999  | Class 38               | 1,500,000 - 1,549,999 |
| Class 30                      | 155,000 - 159,999  | Class 39               | 1,550,000 - 1,599,999 |
| Class 31                      | 160,000 - 164,999  | Class 40               | 1,600,000 - 1,649,999 |
| Class 32                      | 165,000 - 169,999  | Class 41               | 1,650,000 - 1,699,999 |
| Class 33                      | 170,000 - 174,999  | Class 42               | 1,700,000 - 1,749,999 |
| Class 34                      | 175,000 - 179,999  | Class 43               | 1,750,000 - 1,799,999 |
| Class 35                      | 180,000 - 184,999  | Class 44               | 1,800,000 - 1,849,999 |
| Class 36                      | 185,000 - 189,999  | Class 45               | 1,850,000 - 1,899,999 |
| Class 37                      | 190,000 - 194,999  | Class 46               | 1,900,000 - 1,949,999 |
| Class 38                      | 195,000 - 199,999  | Class 47               | 1,950,000 - 1,999,999 |
| Class 39                      | 200,000 - 204,999  | Class 48               | 2,000,000 - 2,049,999 |
| Class 40                      | 205,000 - 209,999  | Class 49               | 2,050,000 - 2,099,999 |
| Class 41                      | 210,000 - 214,999  | Class 50               | 2,100,000 - 2,149,999 |
| Class 42                      | 215,000 - 219,999  | Class 51               | 2,150,000 - 2,199,999 |
| Class 43                      | 220,000 - 224,999  | Class 52               | 2,200,000 - 2,249,999 |
| Class 44                      | 225,000 - 229,999  | Class 53               | 2,250,000 - 2,299,999 |
| Class 45                      | 230,000 - 234,999  | Class 54               | 2,300,000 - 2,349,999 |
| Class 46                      | 235,000 - 239,999  | Class 55               | 2,350,000 - 2,399,999 |
| Class 47                      | 240,000 - 244,999  | Class 56               | 2,400,000 - 2,449,999 |
| Class 48                      | 245,000 - 249,999  | Class 57               | 2,450,000 - 2,499,999 |
| Class 49                      | 250,000 - 254,999  | Class 58               | 2,500,000 - 2,549,999 |
| Class 50                      | 255,000 - 259,999  | Class 59               | 2,550,000 - 2,599,999 |
| Class 51                      | 260,000 - 264,999  | Class 60               | 2,600,000 - 2,649,999 |
| Class 52                      | 265,000 - 269,999  | Class 61               | 2,650,000 - 2,699,999 |
| Class 53                      | 270,000 - 274,999  | Class 62               | 2,700,000 - 2,749,999 |
| Class 54                      | 275,000 - 279,999  | Class 63               | 2,750,000 - 2,799,999 |
| Class 55                      | 280,000 - 284,999  | Class 64               | 2,800,000 - 2,849,999 |
| Class 56                      | 285,000 - 289,999  | Class 65               | 2,850,000 - 2,899,999 |
| Class 57                      | 290,000 - 294,999  | Class 66               | 2,900,000 - 2,949,999 |
| Class 58                      | 295,000 - 299,999  | Class 67               | 2,950,000 - 2,999,999 |
| Class 59                      | 300,000 - 304,999  | Class 68               | 3,000,000 - 3,049,999 |
| Class 60                      | 305,000 - 309,999  | Class 69               | 3,050,000 - 3,099,999 |
| Class 61                      | 310,000 - 314,999  | Class 70               | 3,100,000 - 3,149,999 |
| Class 62                      | 315,000 - 319,999  | Class 71               | 3,150,000 - 3,199,999 |
| Class 63                      | 320,000 - 324,999  | Class 72               | 3,200,000 - 3,249,999 |
| Class 64                      | 325,000 - 329,999  | Class 73               | 3,250,000 - 3,299,999 |
| Class 65                      | 330,000 - 334,999  | Class 74               | 3,300,000 - 3,349,999 |
| Class 66                      | 335,000 - 339,999  | Class 75               | 3,350,000 - 3,399,999 |
| Class 67                      | 340,000 - 344,999  | Class 76               | 3,400,000 - 3,449,999 |
| Class 68                      | 345,000 - 349,999  | Class 77               | 3,450,000 - 3,499,999 |
| Class 69                      | 350,000 - 354,999  | Class 78               | 3,500,000 - 3,549,999 |
| Class 70                      | 355,000 - 359,999  | Class 79               | 3,550,000 - 3,599,999 |
| Class 71                      | 360,000 - 364,999  | Class 80               | 3,600,000 - 3,649,999 |
| Class 72                      | 365,000 - 369,999  | Class 81               | 3,650,000 - 3,699,999 |
| Class 73                      | 370,000 - 374,999  | Class 82               | 3,700,000 - 3,749,999 |
| Class 74                      | 375,000 - 379,999  | Class 83               | 3,750,000 - 3,799,999 |
| Class 75                      | 380,000 - 384,999  | Class 84               | 3,800,000 - 3,849,999 |
| Class 76                      | 385,000 - 389,999  | Class 85               | 3,850,000 - 3,899,999 |
| Class 77                      | 390,000 - 394,999  | Class 86               | 3,900,000 - 3,949,999 |
| Class 78                      | 395,000 - 399,999  | Class 87               | 3,950,000 - 3,999,999 |
| Class 79                      | 400,000 - 404,999  | Class 88               | 4,000,000 - 4,049,999 |
| Class 80                      | 405,000 - 409,999  | Class 89               | 4,050,000 - 4,099,999 |
| Class 81                      | 410,000 - 414,999  | Class 90               | 4,100,000 - 4,149,999 |
| Class 82                      | 415,000 - 419,999  | Class 91               | 4,150,000 - 4,199,999 |
| Class 83                      | 420,000 - 424,999  | Class 92               | 4,200,000 - 4,249,999 |
| Class 84                      | 425,000 - 429,999  | Class 93               | 4,250,000 - 4,299,999 |
| Class 85                      | 430,000 - 434,999  | Class 94               | 4,300,000 - 4,349,999 |
| Class 86                      | 435,000 - 439,999  | Class 95               | 4,350,000 - 4,399,999 |
| Class 87                      | 440,000 - 444,999  | Class 96               | 4,400,000 - 4,449,999 |
| Class 88                      | 445,000 - 449,999  | Class 97               | 4,450,000 - 4,499,999 |
| Class 89                      | 450,000 - 454,999  | Class 98               | 4,500,000 - 4,549,999 |
| Class 90                      | 455,000 - 459,999  | Class 99               | 4,550,000 - 4,599,999 |
| Class 91                      | 460,000 - 464,999  | Class 100              | 4,600,000 - 4,649,999 |
| Class 92                      | 465,000 - 469,999  |                        |                       |
| Class 93                      | 470,000 - 474,999  |                        |                       |
| Class 94                      | 475,000 - 479,999  |                        |                       |
| Class 95                      | 480,000 - 484,999  |                        |                       |
| Class 96                      | 485,000 - 489,999  |                        |                       |
| Class 97                      | 490,000 - 494,999  |                        |                       |
| Class 98                      | 495,000 - 499,999  |                        |                       |
| Class 99                      | 500,000 - 504,999  |                        |                       |
| Class 100                     | 505,000 - 509,999  |                        |                       |

Never spend Ch 1 (Apr 85) to FM 3-16, Road Rules and Classifications, before you cross that steel bridge. If you're needing the preferred weight classification number for your vehicle, page IV-1, appendix IV, give it down righter than your private field telephone.

The 1-3-3 order of vehicle weight marking preference is:



So make sure the right weight classifications are on your vehicle.

## RODS AND FRAMES

Rodco's rods and frames for winter doors and curtains on that M15A1 H-400 truck! Maybe you missed seeing Ch 1 (Mar 81) on TM 5-2108-218-20F. You'll find rods and frames for just about any door and side curtain, and can be had separately also.

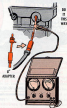


## TACHOMETER-DWELL TEST SET

You may have a new model multi-needle dwell test set, FSN 4543-788-4545, which replaces the FSN 4543-505-1000 test set in your No. 1 Supplemental Tool Kit and your No. 2 Common Tool Kit. It's added to the No. 2 Common by Change 1 (May 60) to DC 4543-05-01-472.

There's one important thing to keep in mind. When you use that new test set, don't connect the tachometer test lead to the spark plug adapter the same way that you did the old test set. If you do, you'll burn out the set.

You'll need the 4543 spark plug adapter FSN 4543-090-7184, from your adapter set FSN 4543-345-7000. The tachometer test lead clamp on the new test set snaps on to the adapter cable instead of to the brass screw on the end of the adapter like the old set did.



SEE  
THE  
SPEC.  
PAGE

## NEW TIRE GAGE FSN



Forget about those old tire gages and hose assemblies for 2 1/2 and 3/4 inch multi-needle design wheels. The new combination is a self-contained, in-line gage and air check with its own FSN 4543-204-2547. In the way of these hoses . . . FSN 4543-090-0104 (200) 12 . . . 4543-091-0001 (200) 12 . . . 4543-090-0106 (200) 12.

Each of these hoses is 1/4-in. ID with a 1/4-18NPT male coupling and 1/2-20NPT female coupling.

## TIRE BEAD BREAKER

HEY, BOSS! WOULD YOU BELIEVE...



Dear Editor,

Breaking the bead on a tire for a repair job can be quite a chore, even with a powerful tire choker. . . unless like some of these files are welded to the shaft!

We've attached you a 2-in. piece of pipe, 24 inches long and welded to broken passenger busbars that shift to one end. These are fastened to broken 1 1/2-in. shaft about 24 inches long.



To use the bead breaker you just slip the pipe on the tire and let your man roll the tire. On a 14-in. 2 1/2-in. wheel the tire will break the bead, while it will take 8 to 2 trips around on a 20-in. . . works like a charm.

CHUCK BENDISPH PHILLIPS  
607 King  
H. Gregg, N.C.



THAT, IT BANG!  
DON'T NEED  
TIRE CHOKER!

Old Nate—Good going. Looks like a real fine tool to have on hand when others fail. Just be sure you use a soap solution on the bead and move the tool around the tire after each impact to give it a little air and keep it from doing any damage.





## AIR FILTER'S AIR HEATER



TE 1-608 1-849-540: IRR and Maintenance Dept., has the warm scoop! If the M15 or M15A1 gas-particulate filter-unit in your tank uses the M1 electric heater (EEM 4240-507-005A) made by Industrial Design Laboratories, you'd best check the heater's controller assembly for loose electrical connections.

If the connections are sloppy, the controller assembly has to be removed so the connections can be tightened. Otherwise, the tank heater won't be ready to provide warm air when it's real cold outside. Pass 'p on the TE info you want to us. M1 heaters made by the Vapor Heater Corporation don't have this problem.

### TO MAKE CONTROLLER JOBBY—

REMOVE  
1 PANEL  
FROM  
THE  
CONTROLLER



BE SURE WATER

REMOVE 1  
SCREW  
AND ICE  
TRAP



# SUPPORT ROLLER ROUNDUP



## Over-Roll Abuse

Thanks to the L3 and the D3, the D3 SM for the D3600 track *over-rolls* each roller. The L3 says to pump that into the support roller until you can feel the disk at the end behind the roller. On the D3, the D3 SM says to replace each roller once it's felt *abused*, which is right.

PHIL H.

Dear Specialist E. E. H.,

Well, once you understand how the pressure works on the support rollers of the M30, M30A1 and M30A2 tracks, you'll see there's no real difference between the L3 and the D3 TM.

When you're taking the spring-loaded road feet pressure just through it when the pressure of the ground pushes down the spring. So, if you put your hand in the same spot behind the roller and feel the ground coming through the road you know that support roller has enough life. That's why the L3 says, "obviously most lubricant can be felt in road behind roller."

After a little of the extra ground gets down out during operation, the ground pressure will no longer be greater than the spring pressure so the spring will expand, keeping in the remaining ground.

In other words, the ground and spring does the same job as the support roller that the pressure relief bearings on the road rollers. That is why you don't have and don't need a pressure relief fitting on the support rollers.

You'll find ground behind the road during taking and sometimes a little bit in low weather or during service operation.

Other times, if you feel a lot of track pressure behind a support roller road, it means that the road is now loading and should be replaced — the D3 TM says.

*High-Altitude*

D3 SM



NOTE: DO NOT OIL HERE



NOTE: DO NOT OIL HERE

## SEARCHLIGHT SAVER

OH, HERO OF KICKERBUSH...  
WOOTTA' and  
DO NOW?



The extra searchlight on your M30 or M30A1 tank isn't shed any light if you break it. This can happen real easy when you're moving your tank through the woods.

To protect your light from accidentally over-heating, position it to the rear of the tank. This way the branches will be the worst friend of the light.

If the light is mounted for operation, pointing the gun in rearward track will give the best protection. If the light is forward, you can go through the woods with the gun on the front.

See page 58 for more searchlight info.

# 771/13/771/13A/Supply

How many feet is an inch?

Your supply apps can quit worrying because there now are all inches for feet, rubber, spiral shaped rollers, ERM 1000-007-0074 should be in feet, instead of per inch.

This chart shows you to locate how much bulk and you need for various sites, where you can find it in TM 9-2300-214-200/13 (Nov 66), and when there is an exception to the rule.

To use it all you have to do is add up the total number of inches of the rubber and you need, change the figure to feet and inches. . . . Then learn mounting rollers.

## ORIG DATA

1. All 11 family 8240 and all 760 family 8210 (p page 14), 01% inches.
2. Exception, 8 018 8240 and 8 041 8210 use and installation in FM 254-004-004, page 201.

## REVISED DATA

1. 8111 and 81541 family vehicles, page 241, 01% inches. See FM 254-004-002 for item operated by bulk and FM 254-004-004 as that's what you need.
2. Exception, 8240 8240 and 8240 8210, as and required because to 81541 bulk.

## COMBINED DATA

1. All members of 8111 (8111) family that have a commander's supply, page 241, 11 inches.
2. Exception, 8111/8111, commander's bulk, page 201, 01 inches.

COMBINED DATA



ORIG DATA

REVISED DATA

## BOOSTER COIL TESTING



If you have an M16A2 tank, an M551 tank recovery vehicle, or any of the other vehicles with a magnetic booster coil, look on to TM 9-2300-211-00 (May 66). It tells you how to build a simple meter to check out this coil. If the coil, PWS 2000-505-0180, is OK, you don't need to replace it—which saves you \$29.00.

# M&M VTR REFUEL FACTS



JUST LIKE  
THE FUEL TRANSFER  
PUMP... THE  
LEVER'S NOT IN  
THE WRONG  
POSITION!

To make the fuel transfer pump on your M&M VTR work right you've got to put the system selector control lever in the REFUEL position. . . . It looks like this.

But some drivers have been storing the lever in the AUXILIARY position, which gives emergency power for the boom and spuds but not the refueling or defueling.

Even when you put the selector lever in the REFUEL position you're still not done yet.



What happens, sometimes, has been having the lever in the backup notch connected while they try to operate the fuel transfer.

This does not work one good. Even when you're not using the wrench, enough oil keeps circulating through it to lower the pressure so your fuel transfer pump won't operate the way it ought to.

Simple cars, though.



Now all you have to do for maximum pumping power of 30 GPM is slowly move your adjustable flow regulator until the handle points straight up. Remember, on this handle the lower



the number the greater the pressure, and unless you have it set "0" you're not getting in full power.

## COMMUNICATIONS



## A PACKAGE FOR PORTABLES

AN CARRY ME COMBO (GRAB THAT MESSKIT!) IS AWESOME!

AN SAY SCEN SCENE TO OFFICER (PLEASE COME!)

### Dear Editor,

We thought you and readers of *PC* might be able to use the boxes as carrying crates we've rigged for transporting good starting kits. If space permits, portable radio sets.

We've made three different sized crates to suit the AN/PSC-1, AN/PSC-2 and -10, and AN/PSC-30 radio sets.

The familiar arrangement we've found is a four-crate rack.

Naturally, the crates protect the sets nicely—they're in crash tanks atop, the field, or otherwise. They've prevented considerable damage . . . and are easy to handle for rough terrain transport.

The easy-to-make pair of the rack is that all you need are a few old canvas boxes and a handful of screws. For added protection, a piece of steel piping over strapping could be put around the outside of the rack. The strapping helps keep the boxes from buckling out.

A block of about 8-in by 4-in covered or lined wire mesh appearing sides proves to a carrying handle. Of course, the bottom of the box is solid.

Here the clear of the wrap (under wood edge wrap, here are the interior measurements needed for each component for the various radio sets.

### AN/PSC-1

10-in long  
4 1/2-in wide  
2 1/2-in deep

### AN/PSC-2, -10

10-in long  
4 1/2-in wide  
2 1/2-in deep

### AN/PSC-30

10 1/2-in long  
4 1/2-in wide  
2 1/2-in deep

Being 1/2-in wider than used, the PSC-1 width measurement could be 10 1/2-in by 10 1/2-in.

## PORTABLES

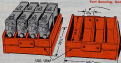


The width and depth hold the case snug during transport. On the PSC-2, -10's you've got to be sure the depth is six inches (not 2 1/2-in), because there's an extension on the top of the set that'd swing and wouldn't fit the set rest on the base of the rack.

Also, we've found that screws hold better than nails . . . and the size of the screws depends on the thickness of the wood used. If screws don't work on a kind of wood, use the brass wood screws used.

If bolts are easy to come by, they could be used to secure the handles.

EDD Boyland Staff  
Fort Ransom, Georgia



# SPEAKER SHOCKER? KNOCKER

HEY? WHAT'S  
AT YOU SAY??

PERSON  
BY  
BACKLASH?



A RT-124 speaker-amplifier getting a backblast from a 100-Watt reelless rifle is about like you getting kicked in the mouth by a mule. It does not feel good and quick.

When you have a RT-124 sealed up with a reelless rifle in, say, an M14 AIC M-16 case, your best bet is to put a blast protector over the RT's speaker.

A loudspeaker shaver (PN 5065-10-4187) for the RT-124 will do the trick. You'll find one listed in Fed-Cat COMBIL-A (36-47) on Page 54.



REPLACE  
GRILL  
ON 294-10-487



SPEAKER  
SHAV

BESTING PROTECTION  
FOR YOUR RT-124 IS A GRILL.  
JUST REMOVE THE SPEAKER  
GRILL SCREWS... PUT THE  
SHUTTER OVER THE GRILL AND  
REPLACE THE SCREWS.



Of course, you have to remember to close the baffles before firing the rifle or you'll blow out the speaker cone.

The protector is needed only with this rifle setup. The speaker's built-in protection will take care of it with other armament.



For hitchhiking a man couldn't want a better friend than a good, warm drink.

For hitchin' with a TA-311/PT or TA-315 field telephone a man couldn't have a more enemy than said same thumb.

Like so.....

Some careless operators, thumbin' gold' fell boys, wear the rubber insulation right off the lead-in wires in the handset. Drive the insulation in the handset and.....

Let's of maintenance shops have seen the results, cause that's where the phones go after the damage.

Another gun-daw it peeling the insulation from the wires. Same result — back to the shop. All because of some careless thumbin'.

Speakin' of field phones (and switchboards) here's a little caution about handlin' on generator hand cranks:

A good habit to get into is to fold the handle back to its rest as soon as you've finished using it.

Hitchin' man, the handle can snag on any of a thousand things and break off,





Trouble is, the links holding the battery ground straps to frames or engines can rust or slip out of the clasp and get overlooked. Dirt and rust get under, lubrication fails, and bolts come loose, a power surge hits the radio, and an actor isn't happy.

Then what rough going comes along, loose connections lead to a dead-off camera. A voltage surge hits a camera power jack, and—whammy!

So inspect at the ground end of all your ground straps. Unbolt 'em and clean the surfaces to make metal-to-metal contact on the chassis—or engine. Check lubrication—be sure they're lube. Then tighten back, and check-eye it every actor's day.

Just to be sure nothing else flickers your camera equipment's current supply—here's what you want to do:

1. Tape brass insulation and replace braided cables.



2. Make sure the entire box and lead-down hardware is cleaned, painted, braided, and tight to the battery can't loosen—just may not be off over the sea.





## LOCKING STARLIGHT SCREWS

THE  
YOUR SCREW  
USE AN "O"  
RING TO CHECK  
THE ADJUSTMENT  
KNOBS.

Are slipping screws keeping things out of focus and you can't adjust the entire camera on your multiple scope? (FM 1850-088-09510)

Don't sweat it.

Remove the screws from the focusing elevation adjustment and azimuth adjustment knobs.

Loos the threads with locking screw-erasing compound (FM 1850-081-2110, listed on Page 88 in CoD using CHEM-E-A, dated Jan 66) or any other MIL-E-21107 (Wardley compound). There's a list on Page 179 of the CoD catalog (Oct 66).

Replace the screws. Let 'em sit for a couple or 3 hours. Then, the screws won't creep and the knobs will stay.

IT TAKES  
WY SCREW  
(MIL-E-21107)  
TO ERASE  
LOCKING  
WIT



## STARLIGHT... STAR BRIGHT

You have wanted a little greater focus for your individual weapons night vision sight (Starlight Scope)? Well, here is an idea. FM 611-510-0817 will get you a SA-1108 battery. It's in Ch 3 (May 66) of SR 11-08.

**NOTICE:**  
LATER  
PAGES  
OF THIS

Keeping property  
books records...

Assembling supplies  
and equipment

OR THIS  
**NEW**

Making up equipment records and reports...

# TOE's AND MTOE's



HERE'S THE  
NEW TOE. IT  
BRINGS TOGETHER  
A LOT OF INFO  
YOU HAD TO  
SCOURGE FOR  
IN THE PAST.

...AND THE NEW MTOE  
FIELD WITH YOU WHERE  
THEY ARE INDICATED



Your outfit will now get all its authorized equipment under one

## TABLE OF ORGANIZATION AND EQUIPMENT (TOE)

which will document and  
will provide the work.

When changes are needed,

## the TOE will be modified by a MODIFICATION TABLE OF ORGANIZATION AND EQUIPMENT (MTOE)

No more scrounging out special forms  
of authorization, or getting equipment  
changes by EIC (equipment modifica-  
tion form).

And, no more special reports for  
items in excess of authorized allow-  
ances, as stated in para 4-8, AR 700-21.  
When your outfit needs more equip-  
ment, less equipment, or different  
equipment to do its job, the MTOE will  
take care of the changes.



Also, in an emergency your outfit can use the same forms available to get an OR from DA for additional equipment. There is no delay in send in the MTOE which includes the equipment requested on an emergency basis.

The big thing with the MTOE is that it's "authorized" in the field by the TOE you command. In the event before the field has a big hand in writing up its authorization documents.

Modification of a TOE—who is responsible for the MTOE, when and how it's made up—is covered in Section 5, AR 700-21 (Apr 66), Organization and Equipment Authorization Tables.



The new TOE format is streamlined,  
easier to use and provides loads of  
handy info on equipment identification  
and use.

The MTOE simply states or leaves  
the basic TOE's allowances so in the  
event of a specific unit or unit.

When a TOE is modified the MTOE  
quotes the EIC book identification codes  
of the unit concerned. That's where you'll  
quickly spot a published MTOE which  
modifies your basic TOE. The MTOE  
OR's for your outfit, of course, will use  
other other units operating under the  
same basic TOE.

If DA policy makes changes which  
apply to all units operating under a  
basic TOE, the TOE will be revised by  
a numbered change, not by MTOE.

And, when DA initiates changes  
which apply across the board for vari-  
ous types of TOE's, the changes will be

published as consolidated TOE changes.  
And, as in the past, the consolidated  
TOE changes will be numbered in the  
MTOE's.

On your property book page the TOE  
allowances give in the "total allowance"  
block and the MTOE allowance give in  
the "maximum approved allowance"  
block.

If your outfit doesn't already have a  
TOE covering the new format, it will  
soon—so keep an eye out for it. You  
can spot a new one easy enough since  
they all have a capital G after the TOE  
number. And, also on the bottom of the  
cover page you'll find a paragraph that  
says:

"This table is published for the pri-  
mary purpose of covering the appro-  
priated EIC on the new format prescribed  
by the New Army Authorization Docu-  
ment System". (NAAADS).

SECTION I AND SECTION II BEGAN TOGETHER EACH THE SAME, BUT IN SECTION III (THE EQUIPMENT SECTION) YOU FIND SEVERAL UP-DATED INFO.



The equipment for each section is as well as listed in a separate paragraph and in the end alphabetical representation of type of equipment collected is listed by category, common, and also in list separate.

In volume is that of as they description tells you the item is include essential and separate under the 200-0 for as the world and 12-0 for known codes.

The remarks volume continues to use 2 digit codes to explain things like who is a certain job a specific item, under what condition you get a certain item, and what companies come with it too.

|      |      |
|------|------|
| 1000 | 1000 |
| 1001 | 1002 |
| 1003 | 1004 |
| 1005 | 1006 |
| 1007 | 1008 |
| 1009 | 1010 |
| 1011 | 1012 |
| 1013 | 1014 |
| 1015 | 1016 |
| 1017 | 1018 |
| 1019 | 1020 |
| 1021 | 1022 |
| 1023 | 1024 |
| 1025 | 1026 |
| 1027 | 1028 |
| 1029 | 1030 |
| 1031 | 1032 |
| 1033 | 1034 |
| 1035 | 1036 |
| 1037 | 1038 |
| 1039 | 1040 |
| 1041 | 1042 |
| 1043 | 1044 |
| 1045 | 1046 |
| 1047 | 1048 |
| 1049 | 1050 |
| 1051 | 1052 |
| 1053 | 1054 |
| 1055 | 1056 |
| 1057 | 1058 |
| 1059 | 1060 |
| 1061 | 1062 |
| 1063 | 1064 |
| 1065 | 1066 |
| 1067 | 1068 |
| 1069 | 1070 |
| 1071 | 1072 |
| 1073 | 1074 |
| 1075 | 1076 |
| 1077 | 1078 |
| 1079 | 1080 |
| 1081 | 1082 |
| 1083 | 1084 |
| 1085 | 1086 |
| 1087 | 1088 |
| 1089 | 1090 |
| 1091 | 1092 |
| 1093 | 1094 |
| 1095 | 1096 |
| 1097 | 1098 |
| 1099 | 1100 |

**THE WORKING TYPE UNIT**

And, speaking of the remarks volume, here's something to watch for when you're checking your equipment against THE allowances.



THE CODES IN THE REMARKS COLUMN ARE PREFIXED AT THE END OF SECTION III.

Although the 888-series coded items—those things you get “When Authorized By” the major commander concerned (WAB TOC, WAB CHAOS-ABC, WAB ABACDCE)—are listed in Section III of the new TOC’s, they’re not included in the TOC’s equipment recap info. In other words, when these items are needed they’ll be authorized by MDCB.



### EQUIPMENT RECAP

The headline deal in the new TOC format is the addition of a new section—Section IV, which is loaded with equipment identification info, and other handy info for supply and maintenance and unit readiness reports and records. It gives things like:

1. The old LIN's crossed to the new LIN's.
2. FSN's for all items listed in the TOC.
3. Crossed-out command codes. The codes are explained in para 6c, SR 700.20.
4. Multiple line items showing FSN's for the authorized makes and models.
5. Equipment type identification. The standard A, B, C, LP, N, etc., identification codes listed in para 6c, SR 700.20.



6. HOP codes. Commandy control points. The supply agencies responsible for the items. And, para 6c, SR 700.20 covers these codes.

7. An appendix in a column headed “AB 710-140” tells you an item is available under AB 710-1.

8. And, an appendix in a column headed “NSC” tells you the item takes TARRS (TM 56-710) records.



### LIN'S, FSN'S... HOP

Yep. Your unit's equipment requesting, accounting and reporting operations should get easier under MDCB. Can't you just see your paper shuffling even easier up already?

# TROOP INSTALLED STUFF

LET'S SEE HOW  
RECALLED BY  
OFFICIAL N. SMITH  
1641 AS FOR DA  
4-1974



Dear Staff Sergeant,

How do you account for major items listed under "Troop Installed" heading in FO's 803?

Do they get a separate property book page? Or, are they listed as components on the back of the page for the major item they're used with?

SFC E. J. A.

Dear Sergeant E. J. A.,

Responsible "troop installed" items which come from your FO or TA are accounted for on the property book page covering your FO or TA allowance for the item.

A "locator" note on the handwritten info on the back of the page page set item on the major and item it's used on.

On the other hand, BUL items which are issued with a major and item are considered part of the equipment they come with and are included in the equipment's basic ESN; therefore, they're accounted for on the page covering the major and item itself.

The page simply takes the most "encompassing" in the manufacturer block. Serial numbers of any weapons that may be issued with the major and item are listed on the back of the page.

*Handwritten note:* 1447-2000  
1447-2000



|      |   |    |
|------|---|----|
| 1000 | 1 | 10 |
| 1100 | 1 | 10 |
| 1200 | 1 | 10 |
| 1300 | 1 | 10 |
| 1400 | 1 | 10 |
| 1500 | 1 | 10 |
| 1600 | 1 | 10 |
| 1700 | 1 | 10 |
| 1800 | 1 | 10 |
| 1900 | 1 | 10 |

|     |                |          |
|-----|----------------|----------|
| DA  | 1,200-440-0001 | 10/10/74 |
| HOW | 20 FT. 100.000 | 10/10/74 |
|     | 1/10/74        |          |

WHERE TO GO ...



Dear Staff/Man,

MY FIRM (OR YOURS) requires that I keep a considerable number of old forms (D&B's) on file.

In what do you suggest we use as a file to keep these cards handy and protected?

R. B. D.



Dear Specialist R. B. D.,

A lot of supply types make their own file boxes out of wood, particleboard, or whatever other suitable material they can scrounge up.

But there's a 3-drawer table-top style file cabinet in the supply system that's designed especially for these 114-by-114-size cards. Listed under D&B 7110-000-0001 in the Cat. C-1100-0L-A (Mar 68), it costs about \$7 and it's a D&B controlled item.

You can file several thousand cards in this cabinet. And it's got stacking slots and interlocking legs for building a bigger file.

# FULL OF HOT AIR

## SIXTY-TON CRANE CARE

Stop! While you're filling in figures for your M&M work or H&W-C&W, add time for operator's time of your various searchlights.

You need to be your support laser when 400 hours have rolled around for operator's time for the big searchlight's Mower motor, like it says in TM 3-5280-284-11 (Mar 68).



WHEN YOU PUT DOWN SEARCHLIGHT OPERATOR TIME ON A REQUEST, DO FORB. PAGE-1 FOR THE LIGHT, ALSO IF JUNEBO TO SHOW US. IF YOU NEED IT, UNDER 1-10 AND 4-10 IN TM 3-5280-284-11 FOR THE AGENCY FOR APPROX. A. FORB. 1

Like P's search, a 30-minute C&W and 30 min also for the searchlight should be passed down to 14 minutes. That's something new for the Mower motor, which keeps going until the lamp lamp's burned.



Without the Mower to drive off the built-up heat, the search lamp and lamp container will burn up.

And remember ... never turn off the vehicle's master electric circuit until less than 5 minutes after turning out the light ... or heat will get an increased M&M, not changing on the searchlight.

THAT SEARCHLIGHT ... HOW NOT TO TRAP ONESELF

You need a drink when it hot, muggy going, and deep country (or makes it worse).

The man's tool for your equipment, only it drinks like a truck when you use. If you're a 60-ton Harwick-type 11250 crawler crane, you have to watch it 'specially' close ... 'cause that main propelling gear chokes down fast.



KEY MARK PROPPELLING GEAR WILL CHOK

See, TM 3-580-311-12 (May 68) says you should use lubricant H&W on that gear every 10 hours — but best to use to give it a drink every 4 hours in hot country or tough going. That gear's under-disk, behind your seat, and there's no cover to protect it. Unless you're quick on the stick with that tube, you could be stuck in the woods with 200,000 pounds of cargo down.

TO SAVE TIME  
SENSE PULLY —



TEST THE  
TORQUE



To keep that expensive pulley on your 30-HP and 35-HP Rotary Standard Engine from coming loose and hobbling your efficiency, here's an answer:

Torque the nut, FOM 1118-182-0781, to break of the pulley down to 750 or 1000 inch pounds (if your wrench reads in foot pounds, that's 90 to-11).

These torque rules both sets of Case/Caterpillar 300 300 Engine Models 24041-01 and 44041-01 as well as both Hugg-Boveland 300 300 Engine Models 24041-01 and 44041-01.

## HUBER-WARCO OIL DRIP



OIL Drip CAPS (TOP) AT THE END OF PIPE



If you've got a Huber-Warco Grade Model 403 with a General Motors 4-71 engine you may have noticed oil bleeding or dripping out of the hood's pipe from the air line.

There's a reason for this drip. The engine piston doors are now made of different material so it takes longer for the piston rings to set in the sleeve walls.

After you've run your rig from 100 to 150 hours the oil drip should stop.



## COMBAT SPECS



Do you want glasses? Well, remember you need a special set of optical lenses for when you wear the MIT field protective mask. See page 18, TM 7-4140.000. US Office GPO. And, if you're planning to make off for some place where the mask is always part of the uniform for the day, be sure you've got the optical lenses before you go. They might not be as easy to come by just any old place.

## BEND THE LEAVES

**Dear Staff-Member:**  
We keep looking for someone  
capable from our TR-10-100 and  
Trainer. Any ideas? **SGT R. W.**

Dear Sergeant R. W.,

Make a Field Bulk plate out of 18-gauge sheet metal and put it behind the bulk head. Bend 2 leaves over the heating cap and 1 over the bulk head.

**Staff-Member**



## Connie Rodd's BRIEFS



### APF-5 Flying Helmet

The air types in Charlie's country had better double-check your APF-5 and APF-5A flying helmets. If it has the star, P/N 8411000-0001 or P/N 8411000-0002, authorized by S/N 10-8410-000-0873 (Aug 64), then you should round the lower edge of the visor. You can do this by filing or filing. You always file toward the edge of the visor.

### Rough Terrain Roll

To make made with your rough terrain but 18, either the 5,800-05 or the 18,000-05 type, better include taking the side-roll rollers and sprockets away 4 to 6 feet. Otherwise they'll freeze up. Naturally, you have to have fittings on all live points, so make sure they're there.

### Save New SPS's

You not only use some your SPS's 12111, but you can get your GWR's 12111 (King Helicopters Unit (P/N 4110-000-0002)) back into operation faster if you'll order the parts to the ground control assembly instead of the whole assembly. You'll find these parts listed in SA-2-0110-000-000 or page 2, under functional control group 060.

### A New Helmet

There's been another helmet MWD you can add to the list to M-171 ... MWD 12100-000-0011 (3 Aug 64), for example, (MWD, 1 and M-171 Co., Street Model 0001, P/N 01 00 000 0000 (Serial number range 000001 through 000000), if you have one of these, better use it in its own support position as it can be clipped to helmet.

### Helmet To Normal

Your MWD on the Special-Major Model 0000 0000-0000-0000 helmet has been changed from MWD 00000000 to MWD 00000000 (P/N 01 00 000 0000) to 0-0000-0 00-00-1 by Change 1 (21 Nov 64) to the last MWD.

### Watch 'Em -- Never Mix 'Em

When you need a part for your generator, don't forget not only old generator parts but also your generator. Make sure you're getting the parts that belong to your equipment. Check the lower (or P/N 1 00-4 and change for the 18-member). Most parts are not interchangeable between different generators as is the case to my tax.



### Wipe Wipe

Taking your whip antenna surface apart once a day to clean it is the best way going to prevent rust and corrosion. Wipe male and female threads dry, and get the dirt out.

### Mount Misters?

Tight connections on your M-1000 and M-1000 mounts of your M-1000 can lead off unless moisture buildup in the junction boxes ... with obvious benefits, so-called, push 07's and connectors likely into moist atmospheres, may cause all the way up, and use in capsule covers other components as cables are removed.

### Dry Chemical Extinguisher

Here's another one of those jet-son-down items. The 2½-lb capacity hand type dry chemical fire extinguisher P/N 421 000-0000, and the dry chemical charge type P/N, P/N 421 000-0000, have been transferred to the Defense Construction Supply Center, Columbia, Ohio 43112. Your requisitions for these items should show Requisition Identifier Code 000.



### Supply SOP

Properly load type, hold one. The info in para 120, at 700-00-000 000, and in para 13, Change 1 (21 Nov 64), at 700-00-000 000, apply to applicable supplies. The instructions on quarterly change apply only to those maintenance items, like it's spelled out in 00 700-00-000 000. To apply in applicable staff their PWT, check your local SOP and para 4-000, at 700-00-000 000.

### One Will Get You 10

One look at para 2-000(1), at 00 700-00-000 000 (para 000 tells you how to remove the fuel injector oil screen on 0-000-0 engines in your limited model generator (000). What it doesn't tell you is how much torque to use. Would you believe 10-100? You should, 'cause that's the correct amount of torque to use. You'll find it spelled out in Ch 1 in 18 700-000-000 (21 Nov 64).

### Keep 'Em Moving

Make sure those things and collectors 00000000 containers — containers of your description — get back into the supply system in good shape after they've been shipped to you. The next load they carry may be for you!

Would You Stake Your Life <sup>right now</sup> on

the Condition of Your Equipment?

**PUHLEEZE!!  
NEVER OPEN REPAIR  
PARTS PACKAGES  
UNTIL THE  
MAINTENANCE MAN  
IS READY  
TO USE  
THEM!**



**WHY?**

BECAUSE, ONCE OUT OF ITS PROTECTIVE SHIPPING CARTON,  
A PART CAN BE GLOBBED BY DIRT AND MOISTURE.